GSE Geometry Module 5

|  |
| --- |
| **LO5.8 I can prove whether or not a specific point lies on a given circle.**  |
| Key Points:Equation of a Circle: $(x-h)^{2}+(y-k)^{2}=r^{2}$If $(x,y)$ is the center of a circle, it is used as $(h,k)$. For example, a circle with a center at $(3,4)$ with a radius of 5 would be written as: $(x-3)^{2}+(y-4)^{2}=25$ |
| **Examples: Write the equation of the circle in standard form.** What is the center of the circle? What is the radius?  The standard form of the equation for this circle is:1. Find the equation of a circle whose diameter has endpoints $(4, -1)$ and $(-6, 7)$.2. Determine if the point is on, inside, or outside the circle $x^{2}+y^{2}=45$. Explain your reasoning.  a. $(6, -3)$ b. $(-1, 7)$ c. $(-3, 5)$3. Points $(a, 5)$ and $(9, b)$ are on the circle $x^{2}+y^{2}=125$. What are the values of $a$ and $b$? |

Work Time:

